

ABSTRACT

The application of electrical equipment for daily needs at home and at office with a variety of new innovations presented increasing from time to time. This is because of the rapid technology development in the days that very beneficial to daily needs. With the increase the use of electrical equipment every day it takes an innovation control aimed at ease human duty.

This final project will developed a closed loop of wireless control system for electrical equipment using wizfi210 wireless module that already have a WEP security system, WPA and WPA2-PSK in its acces point. So that control can be conducted at a distance away with the level of safety that can be relied on. A closed loop system developed at this final project is aimed to make feedback system able to transmit a signal to detect the state of load / electrical equipment in good condition or not. As for Human Machine Interface used is Android-based applications and microcontroller ATmega 8535 as banders and triac as electronic switch.

From the results of measurements performed on the system, it measure that from the architectur, round trip time delay between Android device as Human Machine Interface with microcontroller as benders is reaching an average of 171.718 ms to control one process of execution. In the measurement of the current gate triac obtained the current gate for driving the load (alternating current) with maximum capability is ± 1.405 mA, whereas when the gate current ≤ 0.700 mA load is off.

Key words: Control System, Closed Loop, Wizfi210, Microcontroler, Triac, Android Aplication.